

In re application of  
S. Dershem and F. Mizori  
Application No. 10/023,520  
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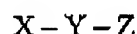
Atty. Dkt. No. QUANT1290-1  
(028248-1803)

**In the Claims:**

Please cancel Claims 4, 8-13, and 28-34. Claim 23 is amended and Claims 35-39 are added by the present amendment. This listing of claims will replace all prior versions and listings of claims in the application:

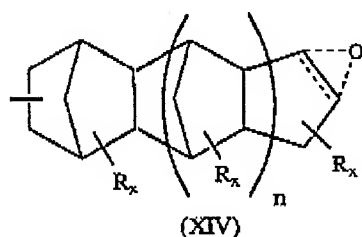
Claims 1-22. (Canceled)

Claim 23. (Currently Amended) A bifunctional monomer according to the following structure:



wherein:

X is a trimer or tetramer of optionally substituted cyclopentadiene bearing at least one functional group, or a radical having one of the following structures:



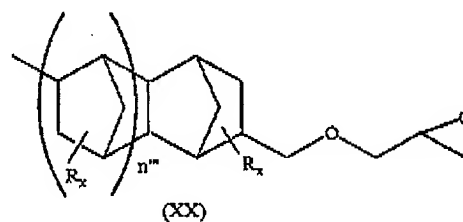
wherein:

each R is independently lower alkyl or halogen,

n is 1 or 2,

n''' is 0 up to about 8, and

each x is independently 0, 1, or 2;



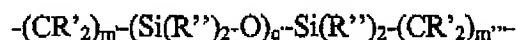
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Y is ~~an optional~~ bridging group selected from a siloxane or aromatic groups; and  
Z is a trimer or tetramer of an optionally substituted cyclopentadiene moiety  
bearing at least one functional group, a radical having structure (XIV), (XX), an epoxy, or  
a cycloaliphatic moiety bearing at least one functional group; and  
wherein at least one of the functional groups on the bifunctional monomer  
is epoxy.

Claim 24. (Previously Presented) A bifunctional monomer according to claim 23,  
wherein Y is siloxane.

Claim 25. (Previously Presented) A bifunctional monomer according to claim 24, the  
siloxane having the structure:



wherein:

each R' is independently a lower alkyl or halogen,

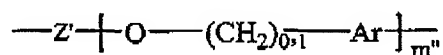
each R'' is independently selected from hydrogen, lower alkyl or aryl,

m' falls in the range of 0 up to about 10,

m'' falls in the range of 0 up to about 10, and

q' falls in the range of 1 up to 50.

Claim 26. (Previously Presented) A bifunctional monomer according to claim 23,  
wherein Y is aromatic groups having the structure:



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wherein:

$m'' = 1, 2 \text{ or } 3,$

each Ar is a monosubstituted, disubstituted or trisubstituted aromatic or heteroaromatic ring having in the range of 3 up to 10 carbon atoms, and

Z' is a high molecular weight branched chain alkylene or alkylene oxide species having from about 12 to about 500 atoms in the backbone thereof,

as well as mixtures thereof.

Claim 27. (Previously Presented) A bifunctional monomer according to claim 23, wherein the substituents are independently lower alkyl or halogen.

Claim 28-34. (Canceled)

Claim 35. (New) A bifunctional monomer according to the following structure:

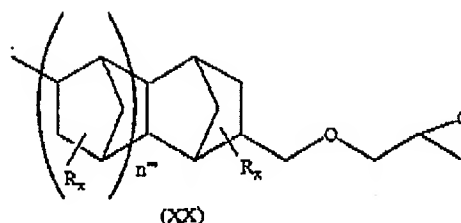
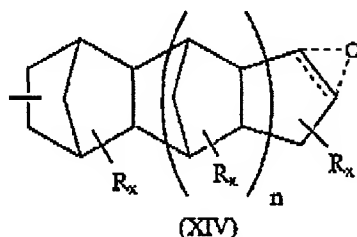


wherein:

X is a trimer or tetramer of optionally substituted cyclopentadiene bearing at least one functional group, or a radical having one of the following structures:

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wherein:

each R is independently lower alkyl or halogen,

n is 1 or 2,

n''' is 0 up to about 8, and

each x is independently 0, 1, or 2;

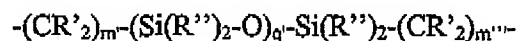
Y is an optional bridging group selected from a siloxane or aromatic groups; and

Z is a trimer or tetramer of an optionally substituted cyclopentadiene moiety bearing at least one functional group, a radical having structure (XIV), (XX), an epoxy, or a cycloaliphatic moiety bearing at least one functional group;

each functional group is independently epoxy, maleimido, norbornyl, cyanate ester, (meth)acrylates, anhydrides, carboxylic acids, amines, amides, sulfides, or polyhydroxy hydrocarbyls; and wherein at least one of the functional groups on the bifunctional monomer is epoxy.

Claim 36. (New) A bifunctional monomer according to claim 35, wherein Y is siloxan .

Claim 37. (New) A bifunctional monomer according to claim 36, the siloxane having the structure:



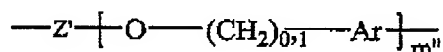
wherein:

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each R' is independently a lower alkyl or halogen,  
each R'' is independently selected from hydrogen, lower alkyl or aryl,  
m' falls in the range of 0 up to about 10,  
m''' falls in the range of 0 up to about 10, and  
q' falls in the range of 1 up to 50.

Claim 38. (New) A bifunctional monomer according to claim 35, wherein Y is aromatic groups having the structure:



wherein:

m'' = 1, 2 or 3,

each Ar is a monosubstituted, disubstituted or trisubstituted aromatic or heteroaromatic ring having in the range of 3 up to 10 carbon atoms, and

Z' is a high molecular weight branched chain alkylene or alkylene oxide species having from about 12 to about 500 atoms in the backbone thereof,

as well as mixtures thereof.

Claim 39. (New) A bifunctional monomer according to claim 35, wherein the substituents are independently lower alkyl or halogen.

DLMR241348.2